

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

RESONANT SYSTEMS, INC. d/b/a RevelHMI,

Plaintiff,

v.

SONY GROUP CORP. and SONY  
INTERACTIVE ENTERTAINMENT INC.,

Defendants.

Case No. 2:22-cv-00424-JRG-RSP

**JURY DEMANDED**

**PLAINTIFF RESONANT SYSTEMS, INC.'S  
REPLY CLAIM CONSTRUCTION BRIEF**

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## **I. INTRODUCTION**

Sony's proposed constructions should be rejected. Sony's brief makes clear that for most limitations it seeks to import the limitations of preferred embodiments into the claims in the absence of lexicography or disavowal of claim scope. Federal Circuit law maintains that this approach is clear error, even under the recent cases cited by Sony. Sony also seeks to import disavowal in the prosecution history of a later-issued patent into an earlier-issued patent, while ignoring the clear teaching of this Court that this is improper. And for the parties' indefiniteness dispute, Sony disregards clear intrinsic evidence and basic logic. Sony's unprincipled constructions should be rejected.

## **II. DISPUTED CLAIM TERMS**

### **A. Preamble of '337 Patent, Claim 2**

In attempting to show that the "linear vibration module" term of the preamble of claim 2 of '337 Patent is limiting, Sony relies heavily on the fact that the term was distinguished over the prior art during the prosecution of later-issued patents. Sony does not (because it cannot) point to any disclaimer in the prosecution of the earlier-issued '337 Patent. This Court has squarely rejected the argument that prosecution disclaimer in later-issued patents applies to earlier-issued patents, such as the '337 Patent:

[T]he enablement rejection and the responsive amendments were specific to the claims of the '898 Patent. In sum, Defendants have failed to demonstrate that the disclaimer in the prosecution history of the '898 Patent should be applied to the earlier-issued '327 Patent and '511 Patent.

*Oyster Optics, LLC v. Coriant Am. Inc.*, No. 2:16-CV-1302-JRG, 2017 WL 6026729, at \*19 (E.D. Tex. Dec. 5, 2017). The Northern District of California reached the same opinion following this Court's reasoning. *Oyster Optics, LLC v. Ciena Corp.*, No. 4:17-cv-005920, Dkt No. 127 *slip. op.*

at 14 (N.D. Cal. Aug. 10, 2020) (disclaimer “does not apply to statements made during prosecution of a child application where the parent application has already issued”).

Sony completely ignores this Court’s opinion,<sup>1</sup> and hand-waves over that of the Northern District of California by pointing to the fact that it “collect[ed] cases” concerning the contrary position while ignoring the court’s actual reasoning. Dkt. No. 65 at 3. The court found that there was no “justification” for applying disclaimer “to statements made during prosecution of a child application where the parent application has already issued.” *Oyster Optics, LLC v. Ciena Corporation*, No. 4:17-cv-005920, Dkt No. 127 *slip. op.* at 14. Furthermore, the court distinguished certain of the Federal Circuit cases cited by Sony by noting that “the Federal Circuit has generally cabined estoppel to *subsequent* applications only.” *Id.* at 13 (citing *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003)). Sony also ignores that claim 2 of the ’337 Patent includes limitations not present in claim 1 of the ’830 Patent (e.g., driving “simultaneous oscillation of the moveable component at two or more frequencies to generate complex vibration modes”), such that there is no reason to assume that any disclaimer made with respect to ’830 claim 1 would be necessary for ’330 claim 2 to overcome prior art. *See* Dkt. No. 62-4 at cl. 2; Dkt. No. 62-3 at cl. 1; Dkt. No. 65-1 at 3-4.

Sony’s reference to the specification of the ’337 Patent as support for rendering the preamble limiting runs afoul of Federal Circuit precedent that “[g]enerally, ... the preamble does not limit the claims.” *Am. Med. Sys., Inc. v. Biolitec, Inc.*, 618 F. 3d 1354, 1358 (Fed. Cir. 2010);

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<sup>1</sup> Sony does not respond to this Court’s statements in the *Oyster Optics v. Coriant* case and instead merely states in a footnote that the quotations do not appear in the cited opinion. Dkt. No. 65 at 3 n.2. Resonant inadvertently cited a later opinion by this Court in the same case, but this mis-citation does not change that Sony fails to distinguish the substance of this Court’s opinion in *Oyster Optics*. Notably, this Court’s decision in *Oyster Optics* was also discussed heavily in the *Oyster Optics, LLC v. Ciena Corp.* case that Sony does discuss but likewise fails to distinguish.

*Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 952 (Fed. Cir. 2006) (“Preamble language that merely states the purpose or intended use of an invention is generally not treated as limiting the scope of the claim.”). Moreover, Sony’s admission that the claims of the ’337 Patent “do not use the phrase ‘vibration module’ or ‘linear vibration module’” (Dkt. No. 65 at 5) refutes its argument that the preamble is limiting in the absence of disclaimer. A preamble limits the invention where it “recites essential structure or steps, or if it is necessary to give life, meaning, and vitality to the claim.” *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (Fed. Cir. 2002). Because the “vibration module” is not used in the claims, it is not necessary to give the claims “vitality,” nor does it provide any “essential structure.” *Id.* The body of the claim already recites a structurally complete invention.

Sony’s construction should be rejected.

**B. “vibration module” (’081 and ’830 patents, claims 1-8, 17)**

Sony seeks to re-word “vibration module” as “vibration device” solely based on mundane Federal Circuit authority that a definition of a claim term may be “implicit” from the specification. Dkt. No. 65 at 6 (citing *Barrday, Inc. v. Lincoln Fabrics Inc.*, No. 2022-1903, 2023 WL 7871688 (Fed. Cir. Nov. 16, 2023) and *Columbia University in City of New York v. Symantec Corp.*, 811 F.3d 1363-1364 (Fed. Cir. 2016)). Nothing about these cases alters long-standing Federal Circuit precedent that lexicography (explicit or implicit) or disclaimer is required to give a term something other than its “plain and ordinary meaning.” *Thorner v. Sony Comp. Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012); *see also JVW Enters., Inc. v. Interact Accessories*, 424 F.3d 1324, 1335 (Fed. Cir. 2005).

Sony concedes there is no disclaimer. Dkt. No. 65 at 7 (“Defendants are not arguing that these statements disclaimed a ‘vibration module’ in favor of a ‘vibrating device.’”). Sony appears

to be arguing lexicography because “device” or “vibrating device” was used once in the patent and two times during the prosecution history. *Id.* at 6-7. While Resonant does not believe that counting the number of times a phrase is used is at all indicative of lexicography, it notes that the phrase “vibration module” is used 96 times in the ’337 Patent. “Vibrating device” is not used once. Sony asserts that “‘vibrating device’ ‘is simply a more understandable articulation of the meaning of ‘vibration module’” but fails to explain—or to provide any evidence—that this is the case. Moreover, being a more “understandable articulation” of a phrase is not one of the grounds for claim construction.

Sony’s construction should be rejected.

- C. **“a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by [user input received from the user-input features] / [one or more stored values]” (’337 Patent, Claim 2; ’081 Patent, Claim 1; ’830 Patent, Claims 1, 20)**

As to the parties’ first dispute regarding microcontroller embodiments, Sony’s own citations illustrate that the specification distinguishes between microcontrollers on the one hand and processors, microprocessors, and CPUs on the other hand. For example, Sony points to the specification’s disclosure that “the LRVM 600 is controlled by a control program executed by the **CPU microprocessor** 602.” Dkt. No. 65 at 10 (quoting ’081 Patent at 6:11-12) (emphasis added). This quotation refers to a “CPU microprocessor”—not a microcontroller—executing a control program. This does not support Sony’s attempt to limit the scope of the claims. As another example, Sony points to the specification’s disclosure of “[r]eturning to microprocessor-controlled or microcontroller-controlled linear vibration modules, it should be noted that **processor or microprocessor** control allows for an essentially limitless number of different vibrational behaviors and modes to be configured by software or firmware design.” *Id.* (quoting ’081 Patent at 13:3-9) (emphasis added). Again, this portion of the specification refers to using software or

firmware for “processor or microprocessor control.” *Id.* Sony’s reliance upon such disclosures that, if anything, contradict Sony’s position that a claimed microcontroller requires a corresponding algorithm is telling. Sony’s argument should be rejected.

As to the parties’ second dispute, Sony’s proposed insertion of “contained within the vibrating device” into the claimed structure should be rejected. Resonant rightly pointed out that § 112 ¶ 6 limits what the claimed structure is rather than where it is located, and Sony responds by citing two inapposite cases that it believes “expressly permit[] structures to include requirements as to where the structure is located.” Dkt. No. 65 at 12. Sony fails to mention that the reason the construction in *Grace Instrument* included the phrase “located in at least one bottom section” in the § 112 ¶ 6 **function** (not the corresponding structure, as Sony asserts) is that this exact language was **already recited in the claim**. See *Grace Instrument Indus. v. Chandler Instruments Co.*, 57 F.4th 1001, 1006, 1007 (Fed. Cir. 2023) (affirming construction of “means for driving said rotor to rotate **located in at least one bottom section**” as subject to § 112 ¶ 6 with a function of “driving said rotor to rotate, where the means for driving is **located in at least one bottom section**”). In other words, the location-related language in the *Grace Instrument* construction was already explicitly recited in the claim—not added by a litigation-driven insertion by the accused infringer, as is the case here. Sony’s reliance on the *NOMOS* case is similarly unprincipled. In that case, the parties disputed whether the corresponding structure required an ultrasound probe only or also a fixation device. *Nomos Corp. v. Brainlab USA, Inc.*, 357 F.3d 1364, 1367-68 (Fed. Cir. 2004). The court determined that the fixation device was part of the required structure because the claimed function could not be performed without it, as the specification made clear. *Id.* at 1368. Those are far from the facts here because there is nothing in the specification indicating that the claimed



function can only be performed if the control component is “contained within” a vibrating device, as Sony proposes.

Sony’s attempts to narrow the scope of the corresponding structure should be rejected.

**D. “a primary oscillation frequency modulated by a modulating oscillation frequency;” “a beat frequency,” and “an aperiodic waveform” (’337 Patent, Claim 3; ’830 Patent, Claim 16)**

Sony’s Brief makes clear that its construction of these phrases is nothing more than an improper attempt to import the limitations of Figs. 22A, 22B, and 23 into the claims. *E.g.*, *JWW Enters.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005) (courts “do not import limitations into claims from examples or embodiments appearing only in a patent’s written description, even when a specification describes very specific embodiments of the invention or even describes only a single embodiment”). Sony claims its constructions are “consistent” with the specification, Dkt. No. 65 at 15, but ignores the express teaching of the patent that these Figures are exemplary only. ’337 Patent at 13:36-41 (“By varying the number, relative amplitudes, and frequencies of two or more driving signals, a microprocessor-controlled or microcontroller-controlled linear-resonance vibration module can be controlled to produce any number of complex vibrational patterns and modes, including periodic modes, modes with multiple different periods, various modulated vibration modes, and even fully a periodic vibration modes that do not repeat time.”). Likewise, Sony ignores the fact that its proposed construction of “an aperiodic waveform” is based on the teaching of a “fully aperiodic waveform,” which is not claimed. ’337 Patent at 13:40-41 (“even fully periodic [aperiodic] vibration modes that do not repeat in time”).

Sony’s claim that Resonant is contending that “any waveform qualifies as any one of these complex vibration modes” is false. Instead, Resonant is contending, based on the declaration of one of skill in the art, that these terms have a plain and ordinary meaning to a POSITA and do not require further clarification. Sony hand-waves over the testimony of Dr. Baker as “conclusory,”

but it declined to take his deposition from which the basis for his opinions might be explored. Moreover, the Federal Circuit has noted that unrebutted expert testimony should be given weight during claim construction proceedings. *SPEX Techs., Inc. v. W. Digital Corp.*, 859 F. App'x 557, 563 (Fed. Cir. 2021) (“Western Digital does not reference any rebuttal expert testimony or dispute Mr. Gomez’s conclusion as to this portion of the recited function.”); *AllVoice Computing PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1241 (Fed. Cir. 2007) (holding that the specification contained sufficient structure because the plaintiff’s expert provided “the only assessment” on record of the specification’s adequacy and the record contained no contradictory evidence).

Sony failed to meet its burden of showing any lexicography (implicit or explicit) or disavowal of claim scope that would deprive these terms of its plain and ordinary meaning. Accordingly, its constructions should be rejected.

#### **E. Typographical Error in Claim 4 ('081 and '830 Patents, Claims 4, 5, 6)**

It is objectively true that a patent claim drafter would be far more likely to mistakenly type a “1” instead of a “3” than they would be to mistakenly add three new phrases into a claim, each preceded by the definite article “the” but without any antecedent basis. Sony dismisses this simple fact, asserting that the latter “is not less plausible ... merely because [it] requires more keystrokes,” citing cases for the unremarkable proposition that a numerical comparison of keystrokes alone is not dispositive. Dkt. No. 65 at 20. Resonant is not arguing that comparing the number of keystrokes decides this issue. But the fact remains that it cannot be reasonably debated that the two corrections identified by Sony are not “equally plausible,” as Sony argues. *See* Dkt. No. 65 at 19. One errant keystroke (mistyping one numeral for another) is far more likely to happen than a patent drafter mistakenly inserting three new limitations (and the word “the” in three separate places) without antecedent basis for any of them. Sony’s cited cases do not suggest otherwise. And tellingly, Sony

provides no explanation—much less a plausible one—as to how a patent drafter would have accidentally added the word “the” three separate times in claim 4. Sony’s failure to respond meaningfully to this point is critical, as its indefiniteness argument rests entirely upon this flawed premise that its two proposed corrections are “equally plausible.” They are not.

Furthermore, Sony ignores that the error occurs in claim 4, which is a natural place to refer back to the immediately preceding claim 3. It is not coincidental that claim 3 provides perfect antecedent basis for the challenged phrases of claim 4, the very next claim (a fact which Sony does not dispute). Claim 4 naturally builds upon claim 3 by adding further limitations to the “adjusts” limitation of claim 3. *See, e.g.*, ’081 Patent at cl. 3 (“wherein the control component ... adjusts one or more operational control outputs of the control component according to the received output signals from the sensors”); *id.* at cl. 4 (“wherein the control component adjusts the one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of the linear vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters”). Sony offers no response to this fact.

According to Sony, “[t]he specification arguably supports both possible interpretations as it does not limit the location of ‘sensors’ to just to [sic] those ‘within the [linear] vibration module.’” Dkt. No. 65 at 19. The absence of an explicit contrary teaching is not “support” for Sony’s baseless Correction 1, and Sony cannot dispute that the specification discloses sensors within the vibration module even if it does not explicitly say that is the only possible configuration. *E.g.*, ’081 Patent at 6:9-29, Fig. 6 (sensor 632 within LRVM 600).

Thus, Resonant respectfully requests that the Court correct claim 4 to recite “of claim 3.”<sup>2</sup>

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<sup>2</sup> Resonant maintains the claims are not indefinite even without correction. Dkt. No. 62 at 15 n.4.

**F. “a strength of vibration produced by the linear oscillation of the moveable component” (’081 Patent, Claim 5; ’830 Patent, Claim 5)**

Sony, once again, relies heavily on *Columbia University* and *Astrazeneca* as support for its attempt to import limitations from preferred embodiments into the claims in support of its construction. However, as discussed above, nothing in those cases changes well-established law that deviating from the plain and ordinary meaning of claims terms requires lexicography or a disclaimer. Here, Sony points to nothing other than “the descriptions of Figures 6-7” and cherry-picked portions of the specification. Dkt. No. 65 at 21. Sony fails to note that, far from being definitional, the patents describe these embodiments as just “one example” of how the inventions work. ’337 Patent at 6:21-23 (“As one example, the user controls may include a dial to select a strength of vibration, which corresponds to the current applied to the coil.”). Moreover, one of Sony’s exemplary cites to the specification uses “current” as an adjective referring to time as opposed to a noun referring to the flow of electricity as required by its construction. Dkt. No. 65 at 21 (citing ’081 Patent at 6:36-42 (“The CPU receives input 630 from one or more electromechanical sensors 632 that generate a signal corresponding to the strength of vibration *currently* being produced by the linearly oscillating mass 634.”)). Simply put, the patents do not have any definition of this term that departs from its plain and ordinary meaning. Sony’s construction should be rejected.

**III. CONCLUSION**

For the foregoing reasons, Resonant’s proposed constructions should be adopted.

Date: May 23, 2024

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**CERTIFICATE OF SERVICE**

I hereby certify that counsel of record who are deemed to have consented to electronic service are being served on May 23, 2024, with a copy of this document via the Court's CM/ECF.

/s/ Reza Mirzaie

Reza Mirzaie